

21. The speech recognition apparatus of claim **16**, further comprising a language score calculator configured to calculate language scores using a language model;

wherein the interpreter is further configured to output the recognition result based on the interpreted scores and the language scores.

22. An apparatus for normalizing input data of an acoustic model, the apparatus comprising:

a window extractor configured to extract windows of frame data to be input to the acoustic model from frame data of a speech to be recognized; and

a normalizer configured to normalize the frame data to be input to the acoustic model based on a sufficient amount of frame data to enable speech recognition.

23. The apparatus of claim **22**, wherein the normalizer is further configured to normalize the frame data based on

frames of all of the extracted windows from a first extracted window to a current extracted window.

24. The apparatus of claim **22**, wherein the normalizer is further configured to normalize the frame data based on frames of all of the extracted windows from a first extracted window to a current extracted window and frames of training data.

25. The apparatus of claim **24**, wherein a number of the frames of the training data is equal to a difference between a total number of the frames of all of the extracted windows from the first extracted window to the current extracted window and a reference value denoting a minimum number of frames to enable speech recognition.

26. The apparatus of claim **22**, wherein the normalizer is further configured to normalize frames of a current extracted window each time a window is extracted.

* * * * *